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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,116	03/06/2002	Heume Il Baek	041501-5489	5138
9629	7590	03/10/2005	EXAMINER	
MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004			NGUYEN, JIMMY H	
			ART UNIT	PAPER NUMBER
			2673	

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/091,116

Applicant(s)

BAEK, HEUME IL

Examiner

Jimmy H. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4-6,8,9,12-14,16 and 17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6,8,14,16 and 17 is/are allowed.
- 6) ☒ Claim(s) 1,4,5,9,12 and 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Request for Continued Examination*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/21/2005 has been entered. Claims 1, 4-6, 8, 9, 12-14, 16 and 17 are currently pending in the application. An action on the RCE follows:

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 4 and 5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claims above, disclosure, when filed, does not contain sufficient information regarding to the claimed features, "a first gamma power unit **formed of a first power voltage**" and "a second gamma power unit **formed of a second power voltage**", of independent claim 1 (see lines 3-6). It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to recognize that a first or second gamma power unit is a physical element, and a first or a second power voltage is a signal, so how a physical element can be

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formed of a signal. Accordingly, the pending claims contain the above underlined features which were not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

4. Claims 9, 12 and 13 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. A buffer (26) (see fig. 6) is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). Independent claim 9 recites "outputting the selected voltage to the source driving circuit" in last 2 lines. However, this apparatus claim does not recite an element to perform the above underlined function. Further, it is noted that the invention of independent claim 9 is read in the embodiment as illustrated by fig. 6 which discloses a need of a buffer 26 in order to output the selected voltage to the source driving circuit.

It is Examiner's suggestion that independent claim 9 should be rewritten to include all of the limitations of claim 13.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 9 recites the limitation "the selected voltage" in last 2 lines. There is insufficient antecedent basis for this limitation in the claim.

7. Claims 12 and 13 are also rejected for the same reason as set forth in claim 9 since it depends upon claim 9.

***Claim Rejections - 35 USC § 102***

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8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Kimura (JP 2000-193936). See the English translation attached in the Office Action dated 3/25/2004, for the following rejections.

As per claims above, the claimed invention reads on Kimura as follows: Kimura discloses a LCD device (fig. 1) including a gamma reference voltage generating circuit which comprises a first gamma power unit (a first reference potential generating section 46a, fig. 2, page 16, paragraph 0115) receiving a first power voltage via a terminal, which is connected to the top resistor of the first output unit (46a) (see fig. 2), a second gamma power unit (a second reference potential generating section 46b, fig. 2, page 16, paragraph 0115) receiving a second power voltage via a terminal, which is connected to the top resistor of the second output unit (46b) (see fig. 2), a switching unit (a potential section circuitry 47, fig. 2, page 16, paragraph 0115), and a buffer (48). Further, see abstract, page 15, paragraphs 0111 and 0113. Accordingly, the elements in the claims above are read in the reference.

10. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Ozawa et al. (USPN: 6,462,724 B1), hereinafter Ozawa.

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As to claim 1, the claimed invention reads on Ozawa as follows: Ozawa discloses a LCD device (fig. 22) comprising a gamma reference voltage generating circuit (see fig. 25) which comprises a first gamma power unit (a potential generating circuit 501, fig. 25) receiving a first power voltage and outputting a first gamma voltage to the switch (506) (see fig. 25), a second gamma power unit (a potential generating circuit 504, fig. 25) receiving a second power voltage and outputting a second gamma voltage to the switch (506) (see fig. 25); and a switching unit (a switch 506, fig. 25). Further, see col. 35, line 6 through col. 36, line 41. Accordingly, the elements in the claim are read in the Ozawa reference.

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura as applied to claim 1 above, and further in view of Kurihara et al. (USPN: 5,854,627), hereinafter Kurihara.

As per claim 4, Kimura further teaches the first (46a) and second (46b) gamma power units using the received first and second power voltages. Kimura does not expressly teach the first and second power voltages different from each other. Accordingly, Kimura discloses all the claimed limitations except that Kimura does not disclose expressly that the first and second power voltages are different, as presently claimed.

However, as noting in fig. 2, Kurihara discloses the first gamma power unit (a unit comprising resistors R81-R88, see fig. 2) receiving and using a first power voltage of 2.8V to

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generate a voltage of 2.53V, which is different from a second power voltage of 0.6V received and used by the second gamma power unit (a unit comprising resistors R11-R17, see fig. 2), to generate a voltage of 0.56V. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to make the Kimura first power voltage different from the Kimura second power voltage, in view of the teaching in the Kurihara reference, because this would generate a plurality of different desired voltages while using a low power consumption due to a decrease of the amount of current flowing in the resistors, as taught by Kurihara (col. 4, line 66 through col. 5, line 12).

13. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozawa as applied to claim 1, and further in view of Kurihara.

As to claim 4, Ozawa discloses all the claimed limitations except that Ozawa does not disclose expressly that the first and second power voltages are different, as presently claimed.

However, Kurihara discloses a first gamma power unit (a unit comprising resistors R81-R88, see fig. 2) using a received first power voltage of 2.8V from a power converter (a converter comprising resistors R1-R8, see fig. 2) to generate a voltage of 2.53V, and a second gamma power unit (a unit comprising resistors R11-R17, see fig. 2) using a received second power voltage of 0.6V from the power converter to generate a voltage of 0.56V. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to make the Ozawa first power voltage different from the Ozawa second power voltage, in view of the teaching in the Kurihara reference, because this would generate a plurality of different desired voltages while using a low power consumption due to a decrease of the amount of current flowing in the resistors, as taught by Kurihara (col. 4, line 66 through col. 5, line 12).

As to claim 5, as noting in fig. 25, Ozawa discloses the output voltage (507) from the switching unit (506), providing to the source driver circuit (5302). Accordingly, Ozawa discloses all the claimed limitations except for a buffer buffering the voltage. However, as noting in fig. 13a, Kurihara discloses expressly that the voltage being amplified by the buffer circuit (OP0-OP9), in order to ensure sufficient powers before being supplied to the data driver is well-known to one of ordinary skill in the art at the time of the invention was made (col. 3, lines 51-55). It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to provide the Kurihara buffer circuit in the Ozawa device, in view of the teaching in the Kurihara reference, because this would ensure sufficient powers before being supplied to the data driver, as taught by Kurihara, thereby improving high picture quality.

#### ***Allowable Subject Matter***

14. Claims 6 and 8 are allowed. See the statement of reasons for the indication of allowable subject matter in the Office Action dated 3/25/2004.

15. Claims 14, 16 and 17 are allowed for the same reason as set forth in claim 6. See the statement of reasons for the indication of allowable subject matter in the Office Action dated 3/25/2004.

#### ***Response to Arguments***

16. Applicant's arguments, see pages 7-13 of the amendment filed on 12/08/2004, with respect the amended claims 1, 4, 5, 9, 12 and 13, have been considered but are moot in view of the new ground(s) of rejection. See the new grounds of the rejection above.

#### ***Conclusion***



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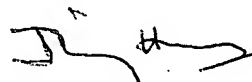
17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is (571) 272-7675.

The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JHN  
March 3, 2005



Jimmy H. Nguyen  
Primary Examiner  
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